

The

February 2002

Ballarat Naturalist



Marine Iguana, Galapagos Is.

The Galapagos Islands—Helen Burgess

In August 2002 Helen travelled to South America and visited the Galapagos Islands. They form a group of 13 volcanic islands and 40 islets located 1000 km west of Ecuador on the equator, with habitats ranging from desert to subtropical zones. Located near the junction of the Cocos and Nazca tectonic plates, they are moving south-east at 7 cm per year. The seas around the islands provide a rich source of food thanks to the cool Humboldt Current flowing north from the Southern Ocean (in an El Nino year when the flow is reversed and no cold water upwells along the coast, the food shortage creates havoc for wildlife and fishermen alike). Five islands are inhabited, with a population totalling 6000.

Discovered by the Spanish in 1535, the islands take their name from the giant land tortoises (the word means 'saddle'). In 1832 they were used as a penal colony by Ecuador, and in 1835 Charles Darwin spent 5 weeks there. Only two islands are free of introduced animals; feral dogs, pigs, goats, and cats have taken their toll of the native wildlife. Reptiles and birds dominate the natural world as the basalt flows are not easily colonised by plants.

Thirteen different finches are found here: they would have flown or rafted from nearby land. There are 10 species of Giant Tortoises, some weighing 270 kgs. They lay up to 20 eggs which take 4-8 months to incubate; the nest temperature determines the sex of the young, with lower temperatures favouring males. Vegetarians, these creatures can live for up to 150 years. Their only natural predators are hawks. Seafarers would catch them and keep them alive on board ship as a fresh food supply.

The world's only marine iguanas live here, feeding on algae which grow on the rocks just below the tideline. Special claws on their feet allow them to cling to rocks and withstand the surf's heavy pounding. The Sally Lightfoot crabs share this zone—brightly coloured crabs whose highly flattened bodies enable them to survive the surf and which run at great speed ahead of the waves.

The Galapagos Penguin is the most truly warm-weather penguin but is reliant on the cool Humboldt Current, and populations fall after El Nino events; the lack of food precludes breeding. Twenty-nine cormorant species are found here including a flight-



less one. Several species of boobies occur, their brightly coloured feet a characteristic of these birds, as are the red sacs of displaying frigate birds. Fur seals and sealions also make the islands their home.

Much of the islands' wildlife has little fear of humans, and Helen was able to obtain spectacular shots of many of the birds, reptiles and seals. The 'oohs' and 'ahs' from the audience indicated everyone's appreciation of hearing at firsthand the experience of one of our members in a unique part of the world.

Additional Reference: *The Blue Planet* BBC Books.

Cape York—Greg Binns

Greg's talk concerned the area of north-east Australia north of 16° North (principally north of Cooktown). He had visited the region twice recently, seeing the Iron Range in the dry season, and the very tip of the Cape in the wet season. With the help of a large sketch map Greg defined the major geomorphologic zones such as the central Peninsula Ridge (granite and volcanics), the Laura Plains on the east side and the Carpentaria basin on the west. These give rise to a range of habitats, influenced by the rainfall which varies from 600 to 1600 mm annually; 90% falls between November and April. The far north is only accessible by road in the dry season; in the wet, access to Bamaga is by boat or air.

Tropical regions typically have a great variety of wildlife species. In the Cape York region can be found 60% of our butterfly species, 156 reptiles, 49 frogs (5 endemic), >320 bird species which is 45% of our birds; 81 mammals (5 endemic); 171 orchids and 3000 vascular plants. Huge biodiversity! Such a wealth of resources provided the wherewithal for a large number of aboriginal groups in the past.

Using his own slides to illustrate the habitats, and BOCA library slides to show us the birds, Greg took us through the various ecological zones. In the closed canopy rainforest we encountered the Magnificent Rifle-bird, Superb Fruit Dove, and the Buff-breasted Kingfisher with its distinctive long white tail feathers and which nests in termite mounds. A special bird was the Red-bellied Pitta, only seen at the tip of Cape York when it arrives to breed.

In the more open forest we saw the strange nest shapes of a colony of Metallic Starlings and the Fawn-breasted Bowerbird which collects green items and paints his

bower with a mixture created by chewing leaves. We saw the Red-necked Crake, Yellow-breasted Boatbill and Frill-neck Monarch, Papuan Frogmouth and Black Bittern. A unique symbiotic relationship was illustrated where the swollen stem of the epiphytic 'ant plant' hosts a species of butterfly larvae whose sugary secretion provides food for a species of ant. The ants provide protection for the larvae.

In open grassy forest with termite mounds was the Lovely Fairy-wren, cobalt blue. The western side of the Peninsula has heath vegetation with banksias and dense understorey which includes pitcher plants. Here was an orb spider as big as your hand, and the Fawn-breasted Honeyeater.

From the Iron Range to the plains, savannas occur with termite mounds; here the Golden-shouldered Parrot nests; however butcherbirds prey on this parrot so trees are being cleared to reduce the numbers of this fierce predator.

In the wet, roads become rivers; pools, creeks, lily ponds fill up, while on the coast the beaches, mangroves and tidal flats all support a variety of life. Crocodiles, the Black-naped Tern and Pale White-eye occur, and a Jabiru was seen scrounging food at the cabins at Pajinka!

The audience enjoyed the detailed shots of the birds unique to this region; we admired Greg's fortitude in braving the perils of the 'wet', and while there were no ticks or leeches, mosquitoes were a real menace, to say nothing of the humidity and the difficulties of keeping camera and binoculars dry and free of mould!



Papuan Frogmouth
(Cayley)

Editor.

Excursion: Yarrowee and Leigh Creeks

Leader: Gail Whyte

After weeks of wet and cloudy weather, the sun shone for our December excursion along the Yarrowee and Leigh river. The Gong Gong Reservoir Park, our starting point, contains an interesting collection of naturally occurring natives and some exotic plant species. The remnant native vegetation is one of the few places left on the Northern extent of the Yarrowee river that shows vegetation as it once was. Here we inspected some planting of eucalypts, wattles and tea-trees that were planted in 1997 and now are up to six metres tall. The river here flowing through granite country was clean and flowing well after recent rains. Two plants growing in the streambed were the yellow-flowered Monkey flower *Mimulus* sp. and the four petalled white-flowered Marsh Cress *Rorippa nasturtium-aquaticum*.

After a cuppa we drove downstream to Ditchfield Road, Brown Hill, where we walked along the Great Dividing Range Trail alongside the Yarrowee river. This walking trail, from Ballarat to Castlemaine, is along the Yarrowee river for a few kilometres. This section has tall Manna gums and Blackwoods. Flowering Kangaroo Apple plants were seen here. After walking through a long tunnel under the Ballarat bypass we inspected the outlet of the flood-retention basin on this section of the river. During a flood, water is allowed to temporarily bank up on the eastern side of the freeway and then to flow through the metre wide pipe under the freeway.

Most of our group continued on foot downstream to Rice Street. This section contains river flats with willows growing along the stream. The willows have been removed in places and local indigenous plants have been planted. In recent years there has been an effort to repair the damage done by the introduction of exotic plants and the dumping of rubbish along the river. This work is now starting to show results. One plant we did not wish to see was African Boneseed that was flowering. We could do without more pest plants. Near the Nerrina Park and Wetlands we saw Onion orchids *Microtis* sp. growing among the grass. Near Rice Street we inspected the plants that some club members planted last year. Some of the plants are now up to two metres high.

After lunch at White Flat oval we drove to Vickers Street, Sebastopol. The first white settlers in the Ballarat area, the Yuilles built a homestead near here in 1838. Below the site of the former homestead is a wetland occupied by many waterbirds. Black and white-eyed ducks, grey teal, little black cormorants, swamphens, moorhens, coots, hoary-headed grebes with their young, swans and cygnets were all feeding in the water.

Our next stop was the Magpie bridge along Docwra Street. Along the riverside there were different coloured layers of silt that had been washed down the river. This silt is the result of sluicing and erosion during the gold-mining. It is over two metres thick. The Ballarat South Treatment Plant upstream of this bridge releases between 16 and 20 megalitres of treated effluent into the river every day. At the Garibaldi bridge earthworks have been carried out to batter the sides of the river. Gabions which are wire mesh cages filled with rock have been placed at the side of the river to stop erosion. Sterile rye corn had been planted to hold the soil until trees that had been planted were established. Our leader for the excursion, Gail Whyte said that the authorities had an obligation to stop siltation of the river to protect the downstream Ramsar wetlands at Geelong.

On the way to the Grand Junction Bridge near Mt. Mercer we stopped at Hardies Hill. The volcanic crater is about one kilometre across. On a small farm dam in the base of



the crater a Great Egret was feeding and a Whistling Kite was soaring overhead. The basalt abutments of the Grand Junction bridge were built in 1875. Concrete decking which replaced the original timber decking was put in 1911. We had a cuppa on the sandbar in the river. A sandstone cliff forms one side of the riverbank at this point. Platypus have been seen in a pool downstream of the bridge. None was seen this time. And so ended a most interesting and enjoyable excursion.

Les Hanrahan.

International Year of Volunteers 2001

To commemorate the efforts of our club in all its voluntary activities we were invited to send a representative to "Hands Up for Volunteers", at the Landcare Centre in Creswick on December 9th. A BBQ lunch preceded guest speaker Martin Scuffins who spoke on his experiences with raptor rehabilitation, and each group was presented with a Certificate of Appreciation from the Victorian Government. It was a good opportunity to meet with other like-minded people and reinforce those positive feelings gained from knowing that we can all have some impact on the wider environmental scene. So give yourselves a pat on the back!



Ecological values of Bracken Fern

How often have we debated whether bracken is native or exotic, a help or hindrance?

The following is adapted from an article in *Land for Wildlife News* Nov/Dec 2001.

A common misconception among many land managers is that bracken fern *Pteridium esculentum* is not a native species. Historical accounts indicate that Australia's indigenous people have utilised the plant both as a food source and also for medicinal purposes. Bracken is a highly competitive and adaptable fern with a widespread distribution in Victoria, south of the 500mm isohyet. Species occur all around the world.

The rapid regeneration in response to disturbances, especially fire, often results in a dense low bracken "canopy". The established underground rhizomes and root system survive fire as do dormant frond buds. After rain, rapid post-fire regrowth occurs,

ahead of potential competitors. The rapid growth shades many competitors, however. In addition bracken produces inhibitory allelopathic chemicals which may further assist its competitive nature.

Bracken can be used to our advantage in the context of regeneration. It initially inhibits the growth of weeds. Loss of grasses as a result of bracken further compounds the "weediness" label commonly given to bracken in productive pastures. But in the management of bush regeneration the shading out of exotic pasture grasses is considered an advantage. Once a canopy develops and creates shade, bracken decreases in density.

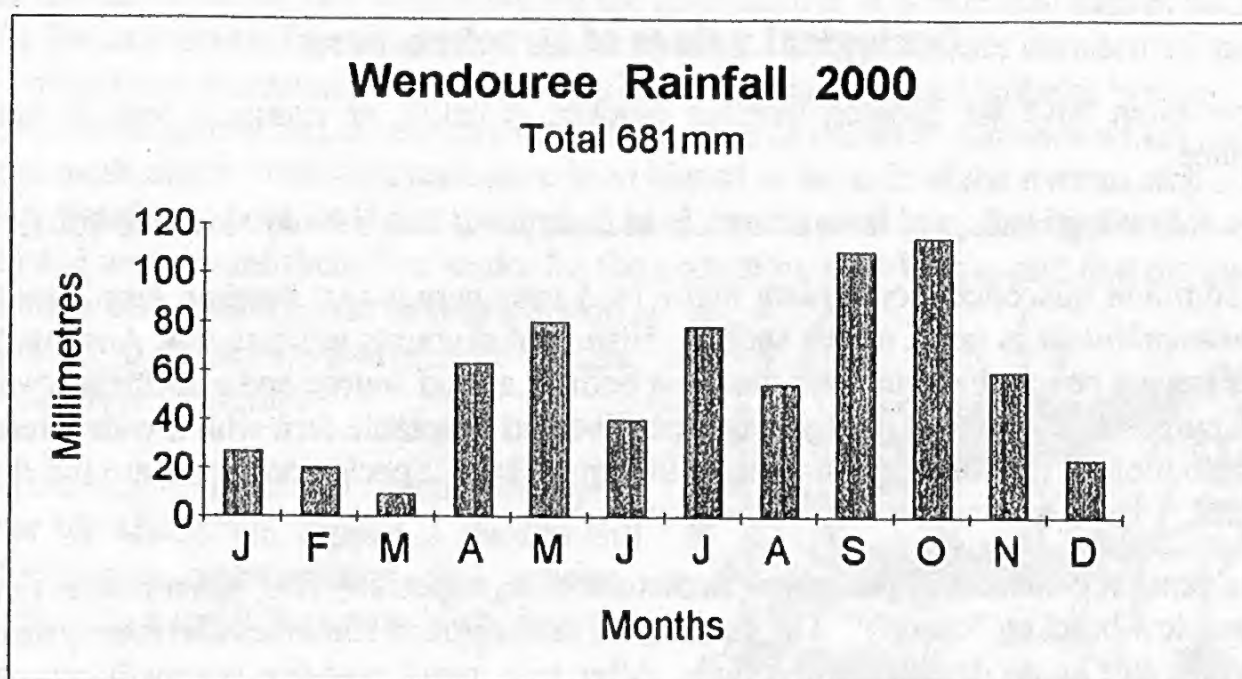


For wildlife, bracken is an important structural component in many forest systems. It provides cover and foraging opportunities to animals that inhabit near-ground vegetation such as lyrebirds, Eastern Yellow Robins, Eastern Whipbirds and bandicoots. Bracken-dominated edge habitat that often forms an ecotone between open forest and pastures is utilised by native foraging and grazing fauna such as Swamp Wallabies, Echidnas, Superb Fairy-Wrens and bandicoots.

How Does Rainfall Vary?

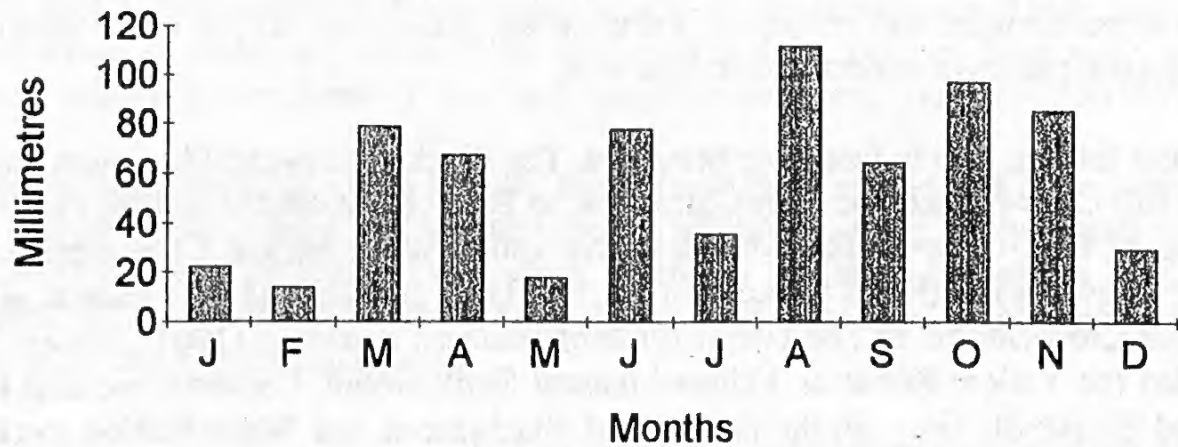
Readers might be interested in these rainfall statistics which I have compiled at home in Wendouree. These graphs enable comparisons to be made between monthly falls over the last two years, and between annual falls since 1990.

Editor.

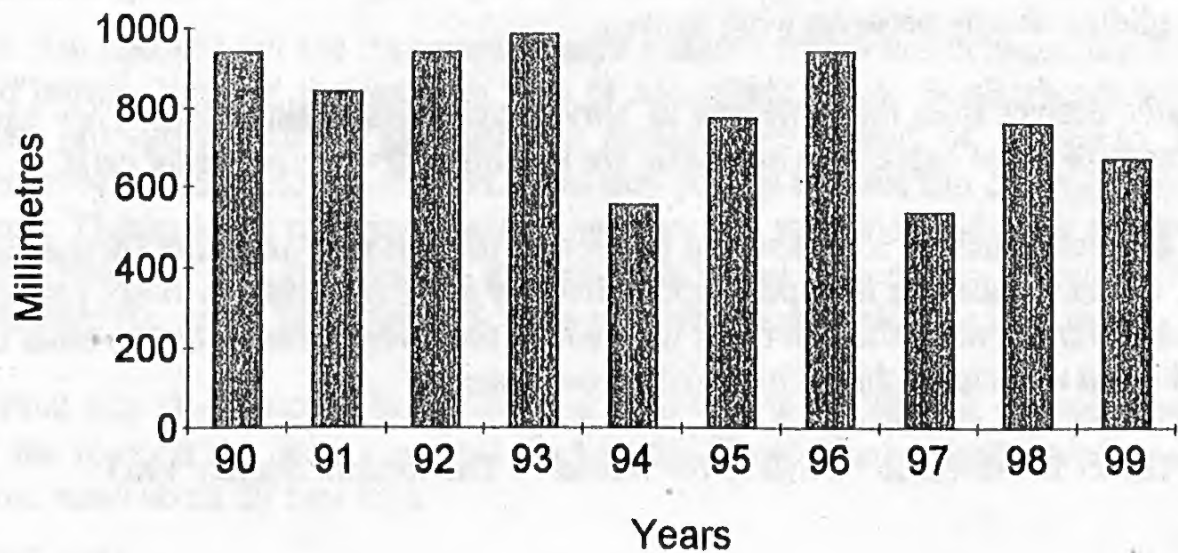


Wendouree Rainfall 2001

Total 701mm



Wendouree 10-Year Rainfall

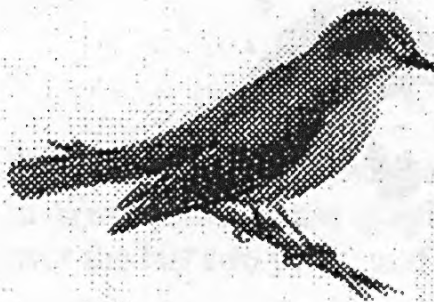


What is a Shrike?

Whilst a handsome shrike-tit was being observed during a recent excursion this question was put forward and comments made on the occurrence of the word 'shrike' in the common names of several Australian birds.

In earlier times it was in fact more prevalent. The Black Currawong (Tas.) was known as the Hill Crow-Shrike, the Grey Currawong as Sooty Crow-Shrike and the Pied Currawong as Pied Crow-Shrike. Magpies were called White-backed Crow-Shrike and Piping Crow-Shrike (Black-backed form). The Grey Butcherbird was known as the Collared Crow-Shrike. In *The Useful Birds of Southern Australia* (1907), Robert Hall included the Yellow Robin as Yellow-breasted Shrike-robin. Currently we still have Crested Shrike-tit, Grey Shrike-thrush, and Black-faced and White-bellied Cuckoo-shrikes.

So, what is it about 'Shrikes' that caused naturalists and observers amongst the early settlers to use the name for a number of bird species in Terra Australis?



Grey Shrike-thrush
(Cayley)

The shrikes, family *Laniidae* (from Latin = butcher) are spread over the continents of the northern hemisphere and Africa and total some 75 species. They did not reach Australia or the Pacific Islands. Described as "the most predatory of perching birds", shrikes are essentially eaters of large insects but some prey on small vertebrates, including birds, and some are nest robbers. The habit of impaling prey on thorns or in forks in plant stems, like a butcher's larder, explains the origin of the family name. They range in length from 15 to 25 cm, are strongly built, generally bold and aggressive, and kill their prey

with a stout bill which is usually hooked at the tip. They have a strong undulating flight, gliding shortly between wing strokes.

The name derives from the same root as 'shriek' and refers to shrill calls. They have a wide range of vocal expression and some are fine imitators of other birds' calls.

These characteristics, if considered in relation to the various Australian species listed above, reveal similarities in appearance, behaviour and flight that obviously prompted early observers to liken them to birds with which they were familiar on the other continents—and to include 'shrike' in the common name !

Ref. Oliver L. Austin Jr. *Birds of the World*. The Reprint Society 1963.

Greg Binns.

Berringa Reservoir and Historic Precinct

On January 3rd Pat and Bill Murphy and Carol Hall visited the Berringa locality after Carol had been alerted to the existence of a reservoir with a bird hide, and a project aimed at preserving relics of the gold mining days. Both of these projects have been initiated by the Break O' Day and Forest Environment Group (BODAFEG).

Approaching Berringa along Browns Road from Smythesdale, the historic precinct is located on the right a few hundred metres along the Shicer Gully-Dereel road. A BODAFEG sign indicates its position. Remains of tanks and shafts have been fenced off, and some fruit trees remain. Further down the road in the deeper parts of the gully more relics can be seen.



The reservoir is located along a short unsigned track which leads off the bitumen directly opposite the entrance to the Recreation Reserve. A sign farther in proclaims the Berringa Reservoir Sanctuary and acknowledges the financial input of ABEF, the funding division of the Bird Observers' Club. The reservoir was once Berringa's town water supply, and has apparently never dried up.

Overlooking the water is a small bird hide; its position also enables the observer to watch bush birds, of which there is a good variety. We heard and saw White-naped and White-eared honeyeaters, White-throated Treecreeper, Superb Fairy-Wren, Striated Pardalote, Grey Thrush and thornbills. We walked around the reservoir which was very full after the recent rains; however no water birds were present. Picnic tables and a fireplace have been provided, and we enjoyed our lunch surrounded by considerable avian activity. Many trees had large clusters of mistletoe whose flowers were attracting the numerous birds.

We also checked out the Illabarook Linear Reserve which lies between the dismantled railway line and the road just west of Moonlight Creek. Featherheads were the most prominent flowers amongst the considerable spread of Kangaroo Grass; Chocolate Lilies were visible and some tiny yellow blooms hid down in the grass stems. Thanks to the cool damp start to summer, the roadsides and other grassy areas have unusually tall and verdant grasses both native and exotic. A Brown Falcon quartered the valley sides, while 8 Yellow-tailed Black Cockatoos flew over.

A final stop along Incolls Road enabled us to look at the Tongue Orchid, blooming by the road on the open area near the beacon. These sturdy plants, green and maroon, stand about 20 cms high.

Editor.

December Meeting Points

- 35 members and visitors were welcomed to the meeting.
- Ballarat Bushland Book: all site reports now completed.
- Greg Binns asked for opinions regarding the VFNCA urban campout proposed by Bendigo FNC; consensus—yes.
- Reminder of March meeting's slide/print theme: *My Favourite Place in Victoria*. Bring up to 12 slides.
- Welcome to new member Norman Falzon.

Show and Tell

- Carol Hall: Newspaper clippings of Science Photography competition showing coloured electron microscopy and macrophotography.
- Lyndsay Fink: Golf Hill named from mounds of earth used as golf tees.

Field Reports

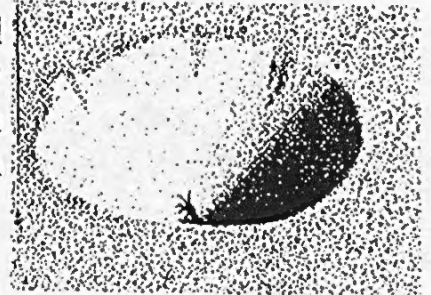
- P. Murphy: Darter diving and swimming in Argyle Dam, Surface Hill.
- D. Brooke: flock of Musk Lorikeets in Wendouree, *E. ovata* blossom.
- H. Burgess: 3rd dead Ringtail possum in garden in 6 years, B't Nth.
- C. Dalman: Kookaburra calling near home in Wendouree.
- J & K Riddell: Fairy Penguin exhausted on main surf beach, Apollo Bay.
- K. Preston: pair of Firetails seen on Yarrowee walk, heard Whipbirds.
- L. Hanrahan: 2 Yellow-tailed Black cockatoos at Bungaree.
- B. Curtain: pair Eastern Rosellas , flock Musk Lorikeets and some Wattlebirds at Observatory.
- G. Binns: pair Peregrine Falcons flying, perching, calling around Mechanics Institute; Australian Hobby over Sebastopol.
- L. Reynolds: Howitt St. 2 Wattlebirds feeding off gum tree for the first time.
- S. Morvell: pair of Brolgas with 3-week old chick at Trawalla.



Did You Know.....?

Ever wondered what made those conical pits in the ground and were told they were made by an ant-lion? And then wondered what an ant-lion was?

Ant-lions are the larvae of those lacewings belonging to the family *Myrmeleontidae*. The pit, usually in sandy ground, is used to trap bugs which struggle to get out but slide down the loose, inclined surface to the bottom, below which the ant-lion is lurking. The ant-lion may spray sand from below to keep the sand sliding. To deal with its prey the ant-lion has two huge sickle-shaped hollow jaws which impale the victim and then serve as tubes through which the victim's body juices are drained.



Bug at bottom of ant-lion pit.

Mature ant-lions pupate in the sand. Adults are beautiful slender insects with two pairs of large, frail lace-like wings.

Reference: *The Living Bush* Peter Wilson. pub Nelson.

Websites

Friends of Mt. Beckworth www.goldlinksweb.com/FOMB

This site contains orchid and bird lists for the Mount, plus a guide to activities and to heritage aspects of the area. Illustrations of birds and orchids have been provided by local enthusiasts.

Natural History Museum, London www.nhm.ac.uk

Contains sections on botany, zoology and geology, a history of the Museum, details of exhibits, reference pages e.g. identifying echinoderms (sea urchins etc), lichens (I found a useful glossary of terms) and there is a bookshop (the Museum publishes its own books as well as jointly with other publishers). There are links to many other natural history sites.

Reviews

Correction: Re Inverleigh Excursion in December 2001 issue.

Many thanks to Lyndsay Fink who has pointed out that Golf Hill was built by George Russell, a one-time manager for the Clyde Pastoral Co.

Tony Johns.

Calendar

Feb.

- Fri. 1 Meeting: Erica Nathan—*Dryland salinity on the Dundas Tablelands*.
 Sun. 3 Excursion: *Werribee Treatment Plant* with Greg Binns.
 Fri. 15 Committee Meeting @ Greg Binns', 7.30pm.
 Book Meeting TBA.

March

- Fri. 1 AGM & Members' Slide Night "My Favourite Place in Victoria".
 Sun. 3 Excursion: Mt. Cole
 8—11 VFNCA Campout, Campaspe Downs.

Supper Duty for	February: Del McDonnell & ?
	March: Volunteers required.

Committee

President Mrs. Carol Hall
Vice-President Mr. Greg Binns
Secretary Mr. John Gregurke
Treasurer Mr. Bob Curtain

Miss Helen Burgess.....
 Miss Maureen Christie.....
 Mrs. Claire Dalman.....
 Mr. Lyndsay Fink.....

Mrs. Carol Hall (Editor).....
 Mr. Les Hanrahan.....
 Mr. John Mildren.....
 Ms. Gail Whyte.....

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Website: www.ballarat.yourguide.com.au Click on *Local Info*. Search *Environment*.

Meetings are held at the Ballarat Horticulture Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

Excursions: Depart from Creswick Plaza, Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30am unless otherwise specified.

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